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Panel of SEREX-defined antigens for breast cancer autoantibodies profile detection

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Abstract

© 2016 Informa UK Limited, trading as Taylor & Francis Group. Content: Identification of panel of SEREX-defined antigens for breast cancer autoantibodies profile detection. Objective: To create panel of antigens that can differentiate breast cancer patients and healthy individuals. Methods: SEREX (serological analysis of cDNA expression libraries) method, ELISA (enzyme-linked immunosorbent assay), qPCR (quantitative polymerase chain reaction). Results: In large-scale screening of 16 SEREX-antigens by sera of breast cancer patients and healthy donors, a combination of six antigens (RAD50, PARD3, SPP1, SAP30BP, NY-BR-62 and NY-CO-58) was identified, which can differentiate breast cancer patients and healthy donors with 70% sensitivity and 91% specificity. Elevated mRNA expression of SPP1 gene was revealed in breast tumors (2–7-fold) that correlated with SPP1 antigen immunoreactivity in autologous patients' sera. Conclusions: The new panel of six SEREX-antigens was proposed, which enables creation of serological assay for breast cancer diagnostics and/or prognosis.

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Keywords

antigenic panel, autoantibody, breast cancer, Tumor-associated antigens

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